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EXAMINER
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ZERPHEY, CHRISTOPHER R

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* HUSNU KERPICCI

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Appeal 2015-007779  
Application 13/003,284  
Technology Center 3700

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Before THOMAS F. SMEGAL, NATHAN A. ENGELS, and  
PAUL J. KORNICZKY, *Administrative Patent Judges*.

SMEGAL, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Husnu Kerpici (Appellant)<sup>1</sup> seeks our review under 35 U.S.C. § 134 of the Examiner's rejection<sup>2</sup> under 35 U.S.C. § 103(a) of claims 1–4, 12–14, and 16–18 as obvious over Smithey (US 2003/0102112 A1, pub. June 5, 2003) and Kreuzer (US 4,763,727, iss. Aug. 16, 1988); and of claims 1–4 and 12–18 as obvious over Smithey and Malisi (WO 2007/031470 A2, pub. Mar. 22, 2007).<sup>3</sup> We have jurisdiction under 35 U.S.C. § 6(b).

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<sup>1</sup> According to Appellant, the real party in interest is Arcelik Anonim Sirketi. Br. 2.

<sup>2</sup> Appeal is taken from the adverse decision of the Examiner as set forth in the Final Office Action, dated June 25, 2014 (“Final Act.”).

<sup>3</sup> Claims 5–11 have been canceled. *See* Amendment filed November 12, 2013.

We AFFIRM.

### CLAIMED SUBJECT MATTER

Claim 1, the sole independent claim, is reproduced below and illustrates the claimed subject matter, with disputed limitations emphasized.

1. ***An evaporator (1) comprising a sheet (2) and a microchannel tube (3) used in a cooling cycle, having arranged channels (K) parallel to each other wherein refrigerant flows, wherein the microchannel tube (3) is fixed on the sheet (2) by bending around an axis (E) that is vertical to the sheet (2) to form a bending portion (B) and on which the channels (K) are in line, so only one of the channels (K) that are in line is in contact with the sheet and one or more than one support member (4) fixed on the sheet (2) and extending along the microchannel tube in the bending portion (B).***

### ANALYSIS

*Obviousness of Claims 1–4, 12–14, and 16–18 over Smithey and Kreuzer*

Appellant argues claims 1–4, 12–14, and 16–18 together in contesting the rejection of these claims as obvious over Smithey and Kreuzer. *See* Br. 10–15. We select claim 1 as the representative claim for this group, and the remaining claims stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv). Appellant also presents a separate argument for claim 12 (Br. 16), which we address *infra*.

*Claims 1–4, 13, 14, and 16–18*

The Examiner finds that Smithey discloses an evaporator comprising a micro-channel tube as recited by claims 1 and 12, but “lacks a sheet and supporting members.” Final Act. 2–3 (citing Smithey, Fig. 10). However, the Examiner finds that Kreuzer discloses a sheet (1) “for mounting heat exchanger structures (2) thereon with a supporting member (24) fixed on the

sheet and extending along the tube in a bending portion.” *Id.* at 3 (citing Kreuzer, Figs. 1, 4; col. 4, ll. 45–47; and col. 5, ll. 1–7).<sup>4</sup>

Based on the foregoing, the Examiner determines that it would have been obvious to have modified Smithey

by mounting the heat exchanger structure (viewed in fig 1) to a sheet with the supporting members of Kreuzer, which places only one of the channels (42) on the narrow edge in contact with the sheet/support member (24 of Kreuzer), in order to provide structural support to the heat exchanger and provide a thermal contact for heat dissipation.

*Id.*

The Examiner also responds to Appellant’s contentions in the Amendment filed June 6, 2017, that “Kreuzer fails to show the pipe 2 is fixed to the sheet, but rather discloses the pipe is in or through the sheet,” by explaining that “at the bend portions, which are the focus of the claims, the pipe 2 . . . is at said locations mounted to the plate rather than through the plate.” *Id.* at 9 (citing Kreuzer, col. 4, ll. 5–8; 45–47).<sup>5</sup>

While Appellant’s arguments in the Appeal Brief appear to be extensive (covering pages 10–16), Appellant merely repeatedly contends that “‘pipe 2’ of *Kreuzer* is not fixed on the sheet, but appears to be in or through such a sheet,” so that “*Kruezer* does not teach the element of ‘the microchannel tube (3) [is] fixed on the sheet (2),’” as recited by claim 1. Br. 11; *see also* Br. 12, 15.

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<sup>4</sup> Kreuzer identifies other panel heat exchangers where a coiled pipe is glued on the carrier sheet. *See* Kreuzer, col. 1, ll. 29–31.

<sup>5</sup> Kreuzer also discloses portions of pipe 2 that are secured to (fixed on) plate 1 by riveted-on brackets 19. *See* Kreuzer, Figs. 6–8; col. 5, ll. 14–19.

However, we agree with the Examiner that Kreuzer “states ‘the connecting arches 2d between the legs 2', 2'', 2''', and 2'''' be led **out of the plate,**’” so that “Kreuzer clearly discloses the portion of the pipe at the bend is on the sheet.” Ans. 9 (again citing Kreuzer, col. 4, ll. 5–6). Furthermore, Appellant has not disputed the Examiner’s assertion that the bend portions of Kreuzer are on the sheet. *See Br.*, generally.

Appellant rephrases the prior argument in contending that “the combination of *Smithey with Kreuzer* would teach one of ordinary skill in the art to have the *Smithey* heat exchanger structure (fig. 1) . . . extending through the sheet having a required slot as apparently taught by *Kreuzer*.” Br. 12. However, the Examiner points out that “[t]he claim does not require nor preclude the presence of slots within the sheet.” Ans. 9; *see Br. 21, Claim App.* Thus, we agree with the Examiner that the presence of additional structures in the prior art, such as the slots of Kreuzer, does not undermine a rejection where the claim defines the invention using the open-ended term “comprising.” *See Exergen Corp. v. Wal-Mart Stores, Inc.*, 575 F.3d 1312, 1319 (Fed. Cir. 2009) (“The claim uses the term ‘comprising,’ which is well understood in patent law to mean ‘including but not limited to.’” (*quoting CIAS, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1360 (Fed. Cir. 2007))).

Appellant also contends “the removal of the slot element from *Kreuzer* would destroy that invention and/ or would teach away from a combination yielding the present invention.” Br. 12. However, the Examiner explains that “*Smithey* rather than *Kreuzer* is the primary reference, so *Smithey* rather than *Kreuzer* is being modified” and that even if “the slots of *Kreuzer* were present in the combination, the claims do not

preclude the straight sections from being placed through the sheet as the claim requires only the bending portions to be on the sheet.” Ans. 10.

Furthermore, the Examiner explains that “the combination does not propose removing the slot sections from Kreuzer nor providing them to Smithey,” so that “the rejection in no way is discussing, modifying, or relying on the slot of Kreuzer; only the supports of the bend portions and the sheet itself were proposed to be provided to Smithey.” *Id.*; see Final Act. 3.

We also find Appellant’s contention to be unpersuasive because it appears to rely on the bodily incorporation of Kreuzer into Smithey. However, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of a primary reference. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). “Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.” *Id.* (citations omitted). In addition, we find using a portion of Kreuzer’s teachings is appropriate in that all of the features of a secondary reference need not be bodily incorporated into the primary reference. *See In re Keller*, 642 F.2d at 425.

We also agree with the Examiner that Kreuzer “provides the teaching to support the bend portions of tubes to [be included with] the primary reference of Smithey,” and that “Kreuzer does not teach away, . . . as [Kreuzer] directly discloses mounting a heat exchanger to a sheet utilizing supporting members at bending portions.” Ans. 10. As our reviewing court explains, a reference does not teach away from claimed subject matter if it does not “criticize, discredit, or otherwise discourage” investigation into the claimed subject matter. *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). Thus, the test is what the combined teachings of the references would have

suggested to those of ordinary skill in the art. *See In re Keller*, 642 F.2d at 413.

Moreover, as pointed out *supra*, the Examiner relies on Kreuzer only for teaching “mounting heat exchanger structures (2) thereon with supporting member (24) fixed on the sheet and extending along the tube in a bending portion.” *See* Final Act. 3. Appellant has not disputed this assertion, and we find that a person of ordinary skill in the art would overcome any potential difficulties with the proposed modification within their level of skill. Thus, Appellant’s argument does not inform us of error.

#### *Claim 12*

Appellant again asserts the arguments presented against the rejection of claim 1 over Smithey and Kreuzer, which we found not demonstrative of error, and then recites additional limitations of claim 12, stating that the “Office Action did not make a *prima facie* case of obviousness regarding this claim.” Br. 16. However, pursuant to 37 C.F.R. § 41.37(c)(1)(iv), such statements do not constitute a separate argument for patentability of claim 12. *See In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (holding that the Board had reasonably interpreted the same language in the prior rule under 37 C.F.R. § 41.37(c)(1)(vii) as requiring “more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art”).

For the foregoing reasons, we discern no error in the Examiner’s findings and sustain the Examiner’s unpatentability rejection of claims 1–4, 12–14, and 16–18 over Smithey and Kreuzer.

*Obviousness of Claims 1–4 and 12–18 over Smithey and Malisi*

Appellant argues claims 1–4 and 12–18 together in contesting the rejection of these claims as obvious over Smithey and Malisi. Br. 16–19. We select claim 1 as the representative claim for this group and the remaining claims stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv). Appellant also presents a separate argument for claim 12 (Br. 20), which we address *infra*.

*Claims 1–4 and 13–18*

The Examiner continues to find that Smithey discloses an evaporator comprising a micro-channel tube as recited by claims 1 and 12, but “lacks a sheet and supporting members.” Final Act. 5–6 (citing Smithey, Fig. 10). However, the Examiner finds that “Malisi discloses a sheet (25 of fig 5) for mounting heat exchanger structures (22) with supporting members (32 and 31) fixed on the sheet and extending along the tube in a bending portion.” *Id.* at 6.

Based on the foregoing, the Examiner determines that it would have been obvious to have modified Smithey

by mounting the heat exchanger structure (viewed in fig 1) to a sheet with the supporting members of Malisi, which places only one of the channels (42) on the narrow edge in contact with the sheet/support member (25 of Malisi), in order to provide structural support to the heat exchanger and provide a thermal contact for heat dissipation.

*Id.*

After first reproducing *verbatim* the Examiner’s rejection from pages 5 and 6 of the Final Action, Appellant purports to provide a translation of portions of Malisi. *See* Br. 16–19. Interspersed with the selective translations are contentions as to the teachings of Malisi, including that “it



appears that element 32 [of Malisi] does not attach the tube bends and the evaporator [is] not shown in detail,” so that “element 32 is not defined in a manner to allow one skilled in the art to be enabled or to combine that element.” Br. 19. Appellant also contends that “*Malisi* is teaching away from ‘extending along the microchannel tube in the bending portion (B)’ as required by the claim,” so that “*Malisi* does not disclose at least this element and/or does not enable element 32 relied on in the office action.” *Id.* Thus, Appellant appears to misread the Examiner’s rejection which relies on pins 31, by which it is illustrated that heat exchanger 22 is fixed on sheet 25. *See* Final Act. 6.

We have reviewed the Examiner’s response set forth in the Answer at pages 11–12. Appellant has not apprised us of any error in those findings or conclusions, and we find none. Therefore, we agree with, and adopt as our own, the Examiner’s findings and conclusions of law.

### *Claim 12*

Even though this rejection of claim 12 is based on the combination of Smithey and *Malisi*, Appellant repeats *verbatim* the arguments previously presented against the rejection of claim 1 based on Smithey and *Kreuzer*. *Compare* Br. 16 and 20. Because Appellant has failed to address the rejection of claim 12 over Smithey and Malisi as articulated by the Examiner, Appellant does not identify any error by the Examiner.

For the foregoing reasons, we discern no error in the Examiner’s findings and sustain the Examiner’s unpatentability rejection of claims 1–4 and 12–18 over Smithey and Malisi.

DECISION

We AFFIRM the Examiner's rejections.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED